

WE CLAIM:

is a composition
composition

1. A standard for calibrating an instrument comprising:
 - (a) one or more viscosity changing polymers; and
 - (b) at least one dye.
2. The standard of claim 1, wherein the viscosity changing polymer is a pH responsive polymer, a temperature responsive polymer, or any mixture thereof.
3. The standard of claim 2, wherein the viscosity changing polymer is a pH responsive polymer.
4. The standard of claim 3, wherein the pH responsive polymer is a liquid at a pH of less than about 4.5.
5. The standard of claim 3, wherein the pH responsive polymer is a hydrophobically-modified alkali-swellable emulsion polymer.
6. The standard of claim 5, wherein the hydrophobically-modified alkali-swellable emulsion is an acrylic carboxylate emulsion polymer.
7. The standard of claim 5, wherein the hydrophobically-modified alkali-swellable emulsion is an alkali-swellable emulsion urethane-modified emulsion polymer.
8. The standard of claim 1, wherein the viscosity changing polymer has a viscosity of at least about 10,000 cP.
9. The standard of claim 8, wherein the viscosity changing polymer has a viscosity of at least about 100,000 cP.

1 10. The standard of claim 1, wherein the viscosity changing polymer is
2 transparent to light at a wavelength ranging from about 300 to about 1,000 nm.

1 11. The standard of claim 1, wherein the dye is a fluorescent dye.

1 12. The standard of claim 1, wherein the instrument is a spectrometer, multi-
2 well plate reader, or imager.

1 13. A container for calibrating a spectrometer comprising:

2 (a) a container; and

3 (b) a standard of claim 1 in or on the container.

1 14. The container of claim 13, wherein the container is a plate.

1 15. The plate of claim 14, wherein the plate is a micro-well plate and the
2 standard is in at least one micro-well of the plate.

1 16. The container of claim 13, wherein the container is a cuvette.

1 17. A process for preparing a standard comprising the steps of:

2 (a) mixing one or more viscosity changing polymers and at least

3 one dye; and

4 (b) gelling the mixture.

1 18. A process for preparing a container for calibrating an instrument
2 comprising the steps of:

3 (a) dispensing one or more viscosity changing polymers and at
4 least one dye into a container to form a mixture; and
5 (b) gelling the mixture.

1 19. The process of claim 18, wherein step (a) comprises the steps of:
2 (i) mixing the viscosity changing polymers and the dye;
3 and
4 (ii) dispensing the mixture into the container.

1 20. The process of claim 18, wherein the viscosity of the viscosity changing
2 polymer being dispensed ranges from about 1 to about 1,000 cP.

1 21. The process of claim 18, wherein the viscosity changing polymer is a pH
2 responsive polymer.

1 22. The process of claim 21, wherein step (b) comprises increasing the pH
2 of the mixture sufficiently to gel the mixture.

1 23. The process of claim 22, wherein the mixture in step (a) has a pH of less
2 than about 4.5 and step (b) comprises increasing the pH to at least about 5.

1 24. The process of claim 22, wherein step (b) comprises diffusing an alkaline
2 gas through the mixture.

1 25. The process of claim 24, wherein the alkaline gas is ammonia gas.

1 28. A method for calibrating an instrument comprising the step of calibrating
2 the instrument with the standard of claim 1.

1 29. The method of claim 28, wherein the instrument is a spectrometer, multi-
2 well plate reader, or imager.